



A close-up of the marine leg shown on the February cover of GRAIN is pictured being lowered into the hold of the Great Lakes freighter awaiting unloading at Buffalo. The marine leg will elevate the grain into the bins for storage and transshipment by rail and barge to St. Lawrence and Atlantic Coast terminal. The grain will then be sent to Europe to fulfil relief-feeding demands.

# GRAIN

MARCH 1949

THE MAGAZINE OF PLANT MANAGEMENT AND OPERATION

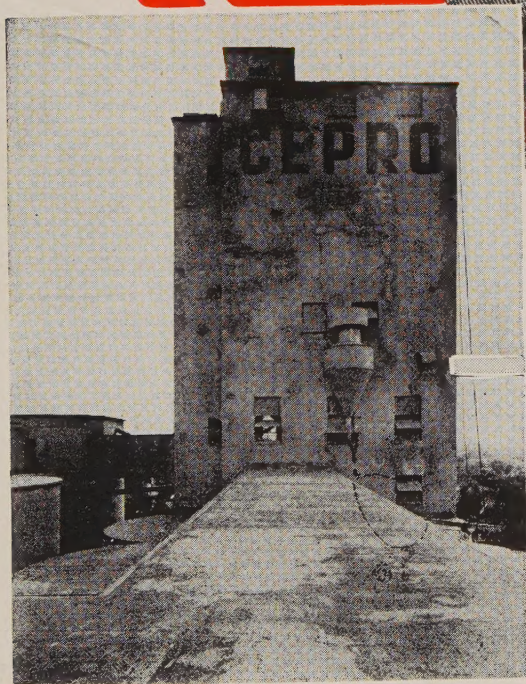




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MARCH 1949

## THE MAGAZINE OF PLANT MANAGEMENT AND OPERATION

DEAN M. CLARK, Publisher  
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### REPRESENTATIVES

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### SOGES CHAPTER MEETING DATES

1st TUESDAY — Minnesota SOGES Chapter. Henry J. Anderson, Bunge Corp., Minneapolis, President; James Auld, Hales & Hunter Co., St. Louis Park, Secretary.

2nd TUESDAY — Omaha Council Bluffs SOGES Chapter. John T. Goetzing, Rosenbaum Bros., Omaha, President; W. S. Pool, Nebraska-Iowa Elevator, Omaha, Secretary.

2nd FRIDAY—Central States SOGES Chapter. M. M. Darling, Acme-Evans Co., Indianapolis, President; N. R. Adkins, Ralston Purina Co., Lafayette, Secretary.

3rd TUESDAY—Kansas City SOGES Chapter. Orin Kinman, Cargill, Inc., Kansas City, President; George D. Duncan, Standard Milling Co., Kansas City, Secretary.

3rd TUESDAY — Chicago SOGES Chapter. Edward Anderson, Norris Grain Co., Chicago, President; Harry Hanson, Glidden Co., Chicago, Secretary.

3rd THURSDAY — Buffalo SOGES Chapter. Cornelius Halsted, General Mills, Inc., Buffalo, President; James Burns, Pillsbury Mills, Inc., Buffalo, Secretary.

### OVERSEAS MAIL

GRAIN received two letters from well-known grainmen, one in Scotland and one in Australia. Excerpts from the letter of L. S. Harrison, Wheat Commissioner and Manager of Government Grain Elevators, Sidney, Australia, read, —“when I was in America in 1935 I had intended to return there by some means or other in about 1942, but the war meanwhile so upset things and caused us all to become so busy that it has not even been possible to think about it. I saw enough to influence me in many ways and to appreciate how much one country can offer another, not only in regard to a man's own line of business but in affairs of life generally. Very best regards to the wheat men of the U.S.A.”—

The other letter, from J. Primrose Brown, Glasgow, Scotland, —“matters drag on pretty much as they have done for the past year or two and we still suffer very much from austerity. However it is rather a strange situation that this socialistic country should have to be bolstered up by a capitalist U.S.A., but there it is, and let us hope the Marshall Plan will tide Europe, including Great Britain, over the difficulties which have arisen out of the war. The rationing of food and electricity almost makes one hope that we will lose the next war, for already we are finding that Germany is undercutting in some of our export markets, and as you know your country and ours are financing the whole of the airlift for the benefit, and indeed the survival, of the Germans.”—

### SIX MURDEROUS BELIEFS

1. Accidents happen to the “other fellow.”
2. An accident will get you when “your number's up.”
3. Accident occurrence is governed by the “law of averages.”
4. Accidents are the inevitable “price of progress.”
5. Caution is something unworthy of our “national heritage.”
6. Accidents are “acts of God.”

### “GOOD CITIZENS”

General Mills, Inc., offers the 72-page illustrated booklet “Good Citizen” to its employes without obligation. The booklet, sold previously from the Freedom Train, presents in simple terms the particulars of American citizenship and digests the priceless documents, work of patriots, past and present, that directly affect the lives of all members of our nation today.

### RESPONSIBILITY

A truck was off the road and ten men tried to lift it back and failed. The driver then reduced the number of men lifting to six and they raised it with ease. An educator explained that with the big group each man felt too little responsibility and did little. He stated that the aim of education is to develop responsibility.

### LEGALITIES ARE TRICKY

Radio's Amos and Andy spoke the following words on one of their programs: “It's the big print that gives you what you want and the fine print that takes it away from you.”

There are many pitfalls in the law for the business man and once tumbled into, often there is no escape. A businessman can hardly be expected to know the law and in the matter of paper-signing should always consult an attorney. The fellow who hopes to stay in business and make money must learn to recognize his need, when it arises, for a lawyer's advice. High-priced legal talent was drafted to prepare the fine-print provisions found in standard legal papers and the businessman must be on the alert for jokers in contracts they sign whether it be leases, contracts, insurance, property, etc. Put them under a microscope.

### RECENT VISITORS

James Auld, Hales & Hunter Co., Minneapolis.

Sam Rice, Rice Grain Co., Toledo, Ohio.

Ron Kennedy, Sec'y, Terminal Elevator Assn, Minneapolis.

Frank M. Walter, Millville, Pa.





**THE BIG  
ONE THAT  
GOT AWAY  
Doesn't Mean  
Anything**

**Capacity DOESN'T  
MEAN ANYTHING EITHER  
UNLESS ELEVATOR BUCKET  
DISCHARGES COMPLETELY!**



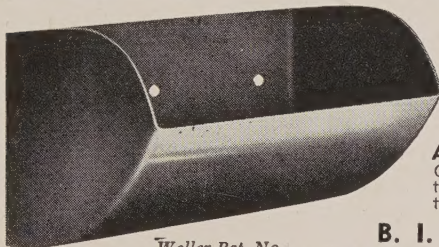
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BUY**

In complete elevator legs, heads, boots and elevator legging, screw conveyor troughs, bins and custom built sheet metal work to specifications.

You've got to **land** a fish before you can determine its size.  
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Or send for capacity data  
that really means some-  
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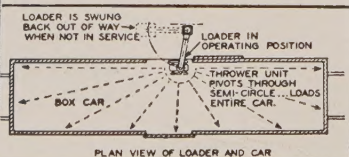
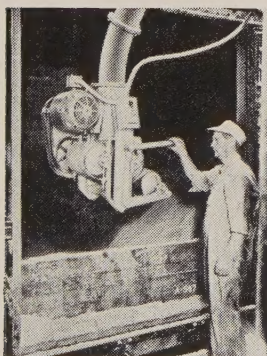
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**HAVE YOU MADE YOUR  
CONVENTION RESERVATION?**

Time's a fleetin'. The first day of the 20th Anniversary Convention of the Society of Grain Elevator Superintendents will show up in an awful hurry and certainly YOU will want to be assured that YOU have a spot in the Nicollet Hotel in which to bunk. May 11 is only a few weeks away so write or call Smith Champlin, Archer-Daniels-Midland Co., 600 Roanoke Building, Minneapolis, to arrange definite reservations.

All reports state that the meeting will be the greatest ever held with attendance figures reaching a new-record high. The committees are working hard to see that all phases that go to make up a successful SOGES convention are being consummated. The Nicollet Hotel is making every effort to insure lodgings for the supers and their parties. SO join in the teamwork and enter YOUR reservation now. If YOU don't — YOU'LL only have YOURSELF to blame if YOUR last-minute appeal for a room meets with a rebuff.

Associates and exhibitors must make their reservations direct to the Nicollet Hotel.

**NEW SOGES MEMBERS**

- 817 A. E. Jacobson, Jacobson Mach. Works  
1090 10th Ave., S. E., Minneapolis, Minn.
- 818 V. L. Oliver, V. L. Oliver Sales Agency  
2836 France Ave. S.  
Minneapolis 16, Minnesota
- 819 E. C. Badenoch, S. Howes Company  
8 South Dearborn Street  
Chicago, Illinois
- 820 Harry Ewert, 740 Chicago Board of Trade  
171 W. Jackson Boulevard  
Chicago 4, Illinois

**THE RAILROADS REPORT**

American railroads carried more tons of freight per train in the year 1948 than ever before and with an increase in average speed, the Association of American Railroads announced today.

At the same time, a new high record was established in freight train performance per hour.

The average load of freight per train in 1948 was 1,176 tons, an increase of 30 tons above the previous high record established in the year 1947, when the average was 1,146 tons. It also was an increase of 37 tons above that in 1944, the peak war year. In 1929, the average was only 804 tons.

Tons of freight moved one mile for each hour of freight train operation averaged 18,779 in the year 1948, compared with the previous high of 18,126 ton-miles in the year 1947 and 10,580 in 1929. The performance in 1948 was greater by 6.6 per cent than the wartime record of 17,623 ton-miles per hour attained in 1944.

Railroads were able to attain this record performance because of improved operating methods, larger and more efficient locomotives, better freight cars, improved signaling and other devices, and heavier loading of freight cars.



# IMPROVED SANITATION WITH RAT CONTROL

AS far back as history can be traced the rodent has played a prominent part in man's fight for existence. The human race has achieved leadership over all manner of life, but has yet to learn to dominate the common ordinary rat. The annual damage traceable to rat infestation in the United States amounts to more than two billion dollars a year. It has been estimated that rats will destroy over two hundred million bushels of grain in 1948, almost half as much as the United States plans to send to Europe this year. These figures, coupled with the fact that one pair of rats under favorable conditions could produce 350,000,000 rats in three years, would indicate the continuing necessity to combat these furry pests. Still another aspect of the problem is the well known function of the rat as a carrier of diseases such as bubonic plague and typhus. It has been said that the rat caused more deaths to the human race than all the wars in history. As man slowly advanced into the civilization that we know today, the rodent and his family has ever kept pace with him, finding food and shelter in our homes and factories. All through his forward advancement man has fought relentlessly to rid himself of this filthy plunderer.

The grain processing industry has long been a leader in advocating sanitary operations in its mills. However, in recent years it has been found that the modern concept of sanitation includes aspects of cleanliness which were not fully recognized in the past. This conception goes far beyond mere freedom from germ contamination; one of the principal interests of modern sanitation is in the presence of filth itself. When speaking of filth in connection with milling we mean rodent excreta, pieces of insects, and insect eggs, all of which are easily recognized forms of filth.

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WILLIAM BUFFUM

Crown Mills  
Portland, Oregon

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It does not take a learned man to realize that a whole or a fragment of a rodent pellet is filthy and undesirable to the consumer. This new concept regarding presence of filth in food products was brought out by the Federal Food, Drug and Cosmetic Act of 1938, Section 402 (A) (3) and (4) which reads "... a food shall be deemed to be adulterated, if it consists in whole or in part of any filthy, putrid or decomposed substance, or if it is otherwise unfit for food, or if it has been prepared, packed or held under unsanitary conditions, whereby it may become contaminated with filth or whereby it may become injurious to health; ...". The need for continued concentration and advanced study by our mills, in the problem of rodent control, as well as by other food producing industries, has become necessary with the development of the Food and Drug Administration of modern methods of analysis involving microscopic examination of food products. These examinations have shown that flour and bakery products of all kinds have contained significant numbers of rodent excreta fragments and rat hairs, making the food objectionable. Further examination has shown that in many cases the filth found was present because of rat or mouse infestation in the mill or warehouse. Of course the wheat used may have contained filth upon delivery to the mill. To examine this aspect of the problem is not within the scope of this paper; we are concerned with the measures which must be taken by mills to prevent the presence of

rodents in the mills and elevators.

The mouse is equally as objectionable as the rat. Although its record as a disease-carrier is not clear, it still leaves filth behind it, and the excreta of mice is quite as undesirable to the consumer as that of rats. Since rats and mice are controlled with practically the same techniques, the two rodents will not be considered separately.

The whole question of rodent infestation and the means of coping with it is repulsive to the average individual. However, in the interest of improving the health of our nation, it is a question that must be met squarely.

Man has been killing rats for centuries without halting the spread of these obnoxious pests. Hence it is apparent that by merely destroying a few rats here and there he will not begin to solve the problem. The satisfactory solution depends upon constant vigilance. Organized campaigns to destroy rats, while often effective in reducing the number for a short period, must be repeated again and again for any chance of achieving lasting results. To be successful, any program must use these four major phases of control. (1) Destruction of rats; (2) elimination of rat harbourages; (3) elimination of food supplies for rats, and (4) the rat-proofing of buildings.

The use of poison is the most efficient means of effecting the wholesale destruction of rats. The only real disadvantage of poison is that any substance deadly to one warm-blooded animal will be more or less poisonous to others. Therefore the safety of human beings, pets, and domestic animals demands that the greatest care be used in the handling of poison and every precaution taken to avoid contaminating foodstuffs. Thus, first of all, a perfect rat poison must not



be of a virulent nature likely to endanger human beings. Second, the poison must be tasteless and odorless. Third, it must be slow in action, thereby giving the rodent time to leave the premises if at all before dying. When a rat is injured or becomes ill from any cause whatsoever, he becomes suspicious of the locality where he first felt discomfort and attempts to get as far away from it as possible. Two poisons used in the extermination of rats, that have

neither taste nor smell, are Thallium Salts and Barium Salts. Thallium is one of the most deadly of all poisons, and because of fatal results to human beings and domestic animals, extreme care must be taken in its use. Barium Salts are slow in action and inexpensive, it is also effective and dependable when properly set out. The reason Barium Salts will kill a rat and yet be comparatively harmless to humans and other animals, is that it causes vomiting and there is

some peculiarity in the rat which prevents vomiting. The poison becomes active in the rat's stomach, causes a corrosive action, bringing on death by slow paralysis. However, the rat can travel a great distance before he is completely paralyzed. Barium Salts are not classed with the virulent poisons and is one of the only two poisons permitted to be used as rat exterminators in meat packing houses and other places under government inspection. The other is Red Squill which has such an obnoxious taste that no animal except the rat will eat it. However, it is not a perfect rat poison because after the initial treatment rats soon get on to its taste and will not again take to baits so poisoned. Phosphorus is an effective rat exterminator.

It is dangerously poisonous, and in the absence of a good antidote is considered unsafe for general use. It may be identified by its distinctive taste, odor and luminous properties. In using phosphorus care must be taken that the correct percentage is used and the paste properly mixed or a fire hazard could exist. Strychnine is a powerful poison with a bitter taste which must be camouflaged before a rat will accept it. Because of its fast action it is not recommended to be used in buildings where the chances of a rat dying in an inaccessible place are greatly increased. Powdered white arsenic is used a great deal in the manufacture of commercial rat poisons. It is usually readily taken when mixed with a palatable bait. But if a first dose does not prove fatal, a rat will refuse baiting. Antu is a chemical highly toxic to the common brown rat, but for some reason much less to the black and climbing rats. As rats are polygamous, less than one per cent would be purebred brown rats. Therefore the number of deaths caused by Antu would be questionable. Zinc Phosphide is a dark gray powder highly toxic to all forms of animal life. It deteriorates rapidly and after a few days baits treated with it become relatively nontoxic.

# ★ PRUNE YOUR OPERATING BUDGET with Modern, Efficient DAY DUST CONTROL

*Cut*

## LABOR COSTS

**DAY** Dust Control slashes sweeping time to a minimum, attracts better employees. By making your elevator a better place to work you cut absenteeism and improve your industrial relations. Men are healthier and work more efficiently when they breathe clean air.

*Cut*

## MAINTENANCE COSTS

Any machine lasts longer and works more efficiently when clean and well lubricated. Fine abrasive grain dusts work into bearings and other moving parts causing excessive wear. This results in plant shutdowns, excessive maintenance and premature machinery replacement.



## DAY DUST CONTROL SYSTEMS

... incorporate sturdily built, perfectly balanced **DAY** Exhaust Fans and **DUAL-CLONE** Separators. **DUAL-CLONES** feature a 2-stage operation for low power requirements and high separating efficiency. For 68 years **DAY** Co. has specialized in designing and building elevator dust control systems. For engineering assistance and cost estimates, Write-to-DAY.



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SINCE 1881



There are two poisons so extremely dangerous to all forms of life that they should be used only by trained professional operators. One of these is the previously-mentioned Thallium Salts, the second is the compound 1080, a product developed during the war and found to have great value as an economic poison, by the Research Laboratory of the Fish and Wildlife Service. Its use is restricted to insured pest control operators and to qualified government technicians. At present there is no known antidote. 1080 is so toxic that one-half ounce mixed with a gallon of water will make a drinking bait so potent that a single sip will kill a rat. Furthermore, since this poison does not disintegrate, a cat or a dog who happens to eat a dead or dying rat will also be killed.

In the actual killing of rats the choice of baits is almost as important as the poison used. Rats will eat almost any food available but they do have individualists that make the choice of baits that they

will take at a given time almost a matter of guesswork. One good method, however, for determining the food most acceptable to the greatest number is by prebaiting. This is done by placing out unpoisoned bait material prepared exactly as the poisoned baits will be later, except for the omission of the poison. Select at least three kinds of bait, giving the rat a choice of moist or dry food. Place the baits to be tested side by side in all spots where it is believed the rats are most likely to feed. The following morning the baits should be picked up, noting the most acceptable bait and the location from where it was taken. Do this for two or three nights, then on the fourth night add the poison. This is a simple procedure and well worth the time and money spent.

While the use of traps and snares are of little permanent value in exterminating a colony of rats, they are nevertheless helpful and should be mentioned. The ordinary snap trap is the most popular of the traps, and for best results, the

more used the better. Mice and young rats are sometimes lured by baited traps, but the older rats with experience will pass them up. A good plan to catch these experienced rats is by setting up a "trail set" which employs the element of surprise. This is done by enlarging the trigger of a snap trap and so placing it along a known runway forcing the rat to cross over it. All traps should be inspected every day to reset and prevent dead rats from decaying. If this should happen, however, the traps should be scalded with boiling water before reusing, but care need not be taken to prevent human or rat odors from remaining on the traps. Since rats depend on man for their existence they are definitely not afraid of the human scent.

Another means of temporary control is by the gassing of rat burrows outside the mill or elevator. Calcium cyanide in a dust or fine powdered form is the gas most commonly used. One advantage in this method being that the rats are destroyed underneath the

# Douglas



## YOUR FUMIGATION PROBLEMS



What is your grain fumigant problem? As far back as 1916, grain handlers and elevator operators were bringing their individual fumigant problems to Douglas Chemical & Supply Company. Through the years, Douglas technicians have given personal attention to thousands of separate and different cases. Frequently, in finding the correct solution, new or improved methods are discovered. You benefit from this source of improvement when you order Douglas fumigants and insecticide sprays.

Write today for complete information.

"PIONEERS OF SAFE INSECTICIDES"

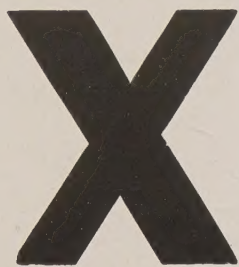
### Douglas Chemical and Supply Company

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BRANCH WAREHOUSES: INDIANAPOLIS, INDIANA; SPOKANE, WASHINGTON;  
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# **DON'T LET**



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#### **ROBERTSON Explosion Ventilators**

##### **WILL**

Remove the more explosive fine dust from the leg by continuous gravity action

##### **WILL**

Release pent-up gases and flames in case of an explosion

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Minimize the possibility of a secondary explosion by continuously venting gases

#### **ROBERTSON Ventilation Engineers**

##### **WILL**

Inspect your elevator and recommend proper sizes and number of ventilators to secure maximum protection at minimum expense.

**Write Now for Details**

## **H. H. ROBERTSON CO.**

**Farmers Bank Building  
Pittsburgh, Pa.**

ground, leaving no problem as to the disposal of the carcasses. Calcium cyanide is a deadly poison and should be used out-of-doors where the air quickly dissipates it. Other gasses that can be used are carbon Monoxide and carbon dioxide.

After the rats are once removed from the mill they can regain their original population in just a few months, unless a campaign is quickly undertaken to remove all harbourages. To survive, a rat needs food, a place to hide and rear its young. Just plain cleanliness will go a long way in removing his food supply. All broken sacks should be quickly picked up, all warehouse floor space should be kept clean as possible. Sack piles should be off the floors and in racks. Trash and garbage should be kept in metal containers, and hauled away before any chance of accumulation. Lumber should be neatly piled and off the floor. In general, a study should be made of all hiding places and pains taken to eliminate them.

In recent years it has been realized that the most potent method to combat rat infestation is to shut them out by rat-proofing the building. In some of our older mills this would be a costly procedure. However, one flour warehouse indicated that it cost more than three thousand dollars a year to repair bags gnawed by rats and mice. Such a loss would go far towards rat-proofing any premises. At present many of our larger cities have rat-proofing laws in connection with their building code. These cities have all shown a marked decline in their rat population. Had such ordinances been enacted and enforced fifty

years ago, the majority of buildings today would be rat-proof, and rats with their accompanying filth and destructiveness would have been largely eliminated. All mills when contemplating rat-proofing will have their individual problems. There are two general principles that will apply in all cases. First, the exterior of the structure accessible to rats must be constructed of material resistant to their gnawing. All openings must be either permanently closed or protected with doors, gratings or screens. Second, the interior of the building must provide no dead spaces, such as double walls, spaces between ceilings and floors, staircases, and boxed-in piping, or any other places where a rat might find safe harbourage, unless they are permanently sealed. Before undertaking any large-scale rat-proofing it is wise to consult with the rodent control department of the Fish and Wildlife Service, or local sanitary inspectors.

In conclusion, it is apparent that the utmost vigilance must be put forth by government, industry and people in general if the rat menace is to be controlled. Rats are the most filthy of all animal life, they wallow and feed by day in the sewers and garbage dumps. Due to the corruption in which they live, they are covered with running sores, a ready host for the lice and fleas that inhabit their breeding places. At night they come forth dragging their black and greasy bodies across our elevators and through our warehouses leaving all manner of filth behind them. Men in charge of food products cannot be too cautious in protecting edibles from the scavengers of the night.

#### **NORRIS SELLS CHICAGO ELEVATOR**

The Illinois Agricultural Assn. has purchased the 2,500,000-bu. elevator located at 107th St. and the Calumet River, according to an announcement by Charles B. Shuman, president, and H. Curtiss, president, Illinois Grain Terminals Co., an affiliate. The purchase price was given at \$1,300,000. The seller

was the Chicago Grain Corp., a subsidiary of the Norris Grain Co. The new owners will take possession June 1.

The purchase of this elevator, it is said, will furnish a merchandising outlet for an Illinois network of farmer-owned inland and river elevator companies affiliated with the Illinois Grain Terminals Co.



## FIRE TAKES HIGH TOLL IN 1948

The year 1948 had the worst fire record in United States and Canadian history. In the major fire losses were 15 large grain industry plants, occupying a prominent position in those record losses. The majority occurred in small communities where volunteer fire departments had neither equipment nor water supplies adequate to control major fires.

Among the major fires were the following:

Valley City Milling Co., Portland, Mich. Loss \$250,000.

Arkansas Mills, West Memphis, Ark. Loss \$270,000.

Honeymead Mankato Co., Mankato, Minn. Loss \$558,000.

H. W. Rickel & Co., Detroit, Mich. Loss \$1,057,000.

Northern Rice Milling Co., Gibson Switch, Ark. Loss \$330,000.

Wm. G. Scarlett & Co., Baltimore, Md. Loss \$472,000.

Postel Milling Co., Mascoutah, Ill. Loss \$275,000.

Colorado Milling & Elev. Co., Jerome, Idaho. Loss \$743,000.

W. J. Small Co., Kansas City, Mo. Loss \$300,000.

Alberta Pool Elevators, Spirit River, Alta. Loss \$480,000.

Denver Elevator Co., Kelim, Colo. Loss \$400,000.

## FIRE RETARDANT PAINT

A specially prepared fire retardant paint, to be used domestically, industrially, for industrial buildings and all wooden structures, has been announced by the F.R.P. Corporation, 1018 So. Wabash Ave., Chicago, Ill. This paint comes ready mixed for immediate application and has all the features of a regular paint in covering and durability plus the special feature of fire retardancy. Smoothness of finish, freedom from brushmarks, good hiding power, and washability are assured.

## OLIVER JOINS S. HOWES CO.

Victor L. Oliver, formerly associated with Superior Separator Co. has been named as the Minneapolis representative of the S. Howes Co., Silver Creek, N. Y.

## TO REMOVE WRECKAGE AT TEXAS CITY

Bids were being accepted by United States army engineers for the removal of the battered hulls of the two ships, the Highflyer and the William B. Keane from the grain elevator slip in Texas City. Both ships have blocked passage since the disastrous explosion almost two years ago which took the lives of hundreds of persons.

## DUST EXPLOSION LOSSES

Incomplete reports for 1948 show that dust explosions during the year caused the loss of 22 lives, injury to 10 persons and a property loss of nearly \$3,500,000. Since 1940 these losses have been quite large.

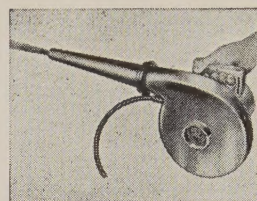
In the 176 explosions reported in the United States for the years 1941-1947, inclusive, 91 lives were lost and the total property loss of more than \$27,000,000, as well as the average annual loss of \$3,858,160 during these seven years, far exceeded the loss during any previous similar period for which information is available. It is interesting to compare the loss figures compiled for earlier decades with the figures cited above, which are for only the first seven years of the present decade.

1911-1920 .....	\$16,913,275
1921-1930 .....	15,233,050
1931-1940 .....	13,375,420
1941-1947 (7 years only)	27,007,122

It is probably more than a coincidence that the losses which were being decreased have shown an increase following the termination of the dust explosion prevention work in the U. S. Department of Agriculture in 1940, because a large percentage of the loss has been in plants producing or handling products of agricultural origin. However, it is also probably true that the present inflated property values are reflected in the loss figures.

These loss figures, and particularly the increased losses in recent years, are a challenge to the Dust Explosion Hazards Committee and all organizations interested in preventing losses of life and property.

# AVOID SHUT-DOWNS



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# CAUSE AND CURE

## Reached Too Far



Man working at top of ladder reached too far to make repairs and the ladder slipped from under him. He fell to a sidewalk below, suffering a broken shoulder blade.

**Correction:** Safety leaders were given posters, safety instruction cards and other materials devoted to the safe use of ladders and every worker was properly instructed. Non-slip ladder shoes were installed and workers were warned about reaching too far.

## Too Hasty

Mechanic preparing to make repairs on a boiler opened a man-hole cover before the vessel was completely drained and hot water poured over him, causing severe scalds that sent him to the hospital.



**Correction:** Mechanics and other repairmen were instructed that they must be sure boilers are completely drained and sufficiently cooled to permit repair before being opened. Foremen were told to check on such jobs before giving their approval.

## Hand Trucking



As workers rolled heavy hand trucks across runboard from freight car to warehouse, the bridge plate began to creep, until it fell to the ground with a freight handler and his load, causing a broken leg.

**Correction:** Warehouse foreman had all runboards and gangway equipment arranged for quick and safe anchoring between car and dock. Steel plate runboards were drilled so that pins could be slipped in holes at either side to prevent slipping.

## No Lock on the Switch



Repairman started power pump without noticing that his helper was still working on the mechanism. The latter was caught in the machinery and suffered fractures of his forearm and a finger.

**Correction:** Repairmen and other key workers were told that they were responsible for instructing their helpers in safe work methods. All repairmen and helpers were given their own safety locks to keep switches locked out until they finish their jobs.

## Axe Slipped

When an unskilled employee tried to use an axe to chop a piece of timber, the blade glanced and struck his right instep, causing a severe laceration and several days' lost time.



**Correction:** Crew bosses told all hands that workers not trained in the use of axes must get permission before using them. They also were warned that all such tools must be kept well sharpened to avoid such accidents.

## Right on His Foot!

When a welder finished cutting off a foot section from a length of heavy 8-inch iron pipe, the piece dropped on his right foot, fracturing two toes.



**Correction:** This accident called attention to a number of similar exposures in the plant and a safety shoe campaign was intensified until practically every worker who needed them had purchased the approved footwear.



# Industrial Utilization of Malting Barley

By Jas. P. Hessburg of Froedtert Grain & Malting Co. at Midwest Barley Improvement Conference, Minneapolis.

The domestic maltsters are the largest industrial users of barley in the country. Their requirements at the present tempo of operation approximate 115 to 125 million bushels annually. Barley under United States government grain standards grading malting barley is not necessarily a criteria of a desirable malting barley. There is much misconception among farmers and grain dealers on this point. Barleys for malting are purchased on the basis: color, odor, thickness of husk, shape and size of the kernel, mellowness, purity of sample, variety, bushel weight, soundness, and free from heat and disease damage. Other tests, chemical in nature, include the determination of moisture, protein and extract.

## Discounts

A common complaint among growers is the discounts which obtain on barley otherwise sound but having heavy under-size or small barley and/or badly skinned and broken barley. Good malting practice demands the elimination of both of these objectionable features in the barley before malting. Consequently, proper cleaning and grading are important. The barley hull or husk is necessary in the malting operation to protect the delicate acrospire which develops under the husk and is protected by it through the various stages of malting. Present cleaning and grading machinery in a large measure eliminates skinned and broken barley. Often the skinned barley is of an equal size to good malting barley included in the mixture so that in the process of preparing the barley for the steep some of the good barley is discharged with the skinned and broken barley. This clean-out ultimately finds its way into feed channels at feed barley prices. A normal clean-out of undersized, broken and skinned barley from country-run barley in a malting plant, is approximately 15 to 18%. The percentage of clean-out may even run higher on particular lots. With this clean-out going into feed channels at discounts of from 50 to 70c per bushel under the price of virgin malting barley, you can readily appreciate that the maltster is very much interested in barley that is plump, heavy, uniform in size, well matured, mellow in texture, and particularly barleys of one variety, excluding any admixture of barleys that are not desirable for malting purposes.

## More Care in Threshing

Barley intended for malting purposes requires much more care in the threshing than barley grown for feed. The value of otherwise good malting barley can be adversely effected by improper threshing methods. I should like to emphasize the importance of proper storage of barley whether on farms, in country elevators, or interterminal storage. With our present highly mechanized type of farming, we are only too prone to over-

look some previous good harvesting procedures. All too often the farmer is out with his combine before the dew is off of the grain and not infrequently the grain is threshed before it is properly dried. Combined grain is then brought to the country elevator, due to lack of storage in most instances, is immediately placed in cars, and sent to terminal markets. Even with the quickest possible dispatch on the part of the railroad companies, this grain arrives in the terminal markets in heated and hot condition destroying its value for malting purposes. Receipts during the past 90 days in terminal markets confirm the thought that much barley which was stored on the farms after the harvest has gone out of condition in storage, to the extent that its value as a malting barley is forfeited and is only fit for feed.

Some of the practical everyday uses to which malt is a requirement are: Beer, flour, yeast (medicinal, bakers and home), malted milk, fountain beverages, breakfast cereals, candies, textile industries, maltose, beverage coloring, coffee substitute, vinegar, synthetic rubber, anti-freeze, ether, fuel, alcohol and animal feed.

## Feed Requirement

Next in importance as a user of barley is the feed manufacturer whose annual requirements approximate 80 million bushels. Much work has been found done by the nutritional experts during the past ten years looking towards the larger consumption of barley by farm animals. It has been found that barley has approximately the equivalent feed value of corn and makes a firmer pork than a straight feeding of corn when fattening hogs.

## By-Products

By-products of barley malt are one of the best sources of protein feed for the farmers. These by-products are distillers grains, brewers grains, malt sprouts and hulls. The present tonnage for these respective by-products are: distillers grains approximately 300,000 tons; brewers grains 225,000 tons; malt sprouts and hulls 80,000 tons. When you consider the normal protein content of our mid-western barley (approximately 12 to 13%) and consider the by-products from this same barley when converted into malt and the finished products, beer and spirits, as representing a protein value of 24 to 32%, you can readily appreciate the value of this tonnage in our domestic feeding program.

There is not as broad a market for barley for pearling as for malt and feed but there is a sizable quantity that goes into the product known as pearled barley. This type of barley, while not usually of a quality selected by maltsters, is a type which has a white pearl as the prime requisite and usually brings a substantial premium over prices paid for feed barley.

# SUM-FUN

Should some young bride in some future year, before her husband set, her first attempt at pie or cake, hear him remark, inept, "quite good, but not the same, my dear, as mother seems to make." She won't despair at his one flaw, or cry that she's abused, she'll merely dial her mother-in-law, and ask, "what brand of pre-mix have you used?"

\* \* \*

"They tell me you sold that pig of yours. Is that right?"

"Yep, that's right. I just sold him this morning."

"How much did he bring you?"

"Eleven dollars."

"What did you give for the pig when he was small?"

"Three dollars."

"How much did he cost you for feed?"

"Eight dollars to the penny."

"Gosh! You didn't make anything on that pig, did you, Zeke?"

"No, but I had his company all fall."

\* \* \*

Two old miners, bachelors, sat in the backwoods. The conversation drifted around, covered politics, and finally reached cooking.

"I got me one a' them thar cook books once, but I never could do anything with it."

"Too much fancy stuff, eh?"

"Thar shor was! Everyone o' them recipes started out the same way. Take a clean dish — and that finished me right thar."

\* \* \*

The henpecked-appearing gentleman was gazing rapturously at a huge oil painting of a shapely girl dressed in only a few strategically arranged leaves. The title of the picture was "Spring."

Suddenly the voice of his wife snapped: "Well, what are you waiting for? Autumn?"

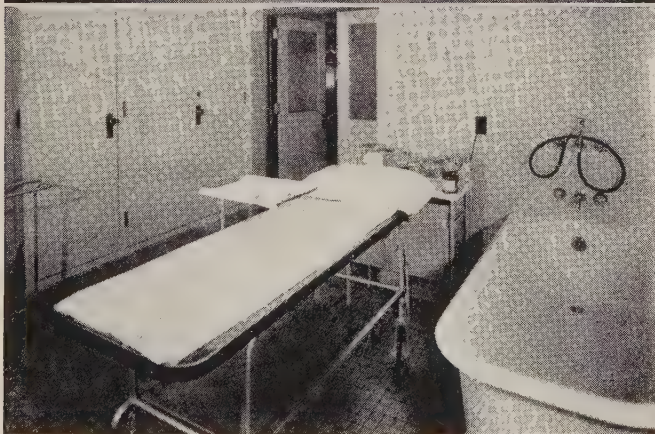
\* \* \*

Claire (to Dorothy): "Say, Dot, have you ever met a man whose touch seemed to thrill every fibre of your being?"

Dorothy (thoughtfully): "Yes, the dentist!"



# A. E. Staley Mfg. Co. Opens First Aid Building



Top: Exterior view of one-story First Aid building in heart of Staley plant area. When landscaping is completed, flower beds will border building. Trellis at right of front entrance is for vines and climbing flowers.

Middle: View of the reception room in the new Safety and First Aid building at A. E. Staley Manufacturing Company, Decatur, Ill. The corn and soybean processing company, which employs 3000 persons, recently completed 1,331,161 man hours without a lost-time accident. It is one of the few industries to be awarded a certificate from the American College of Surgeons for its first aid establishment.

Bottom: Receiving room in the first aid building, laid out so as to assure speedy treatment for shock, hemorrhage or burns. Tub at right is used for hydrotherapy. The building is equipped with lock-wheel stretchers in place of operating tables for easier handling of bed patients. Cabinets at left are filled with dressings prepared for treatment of burns or other injuries which might occur. The building is open at all hours seven days a week. In addition to the receiving room, there is a surgery room and a room for treating minor injuries. There is a staff of six registered nurses and three doctors.

A new \$100,000 safety and first aid building in which special attention is given to speedy treatment for shock, hemorrhage and burns has been completed by A. E. Staley Manufacturing Company, Decatur, Illinois.

The corn and soybean processing company, which employs about 3,000 persons, recently completed 1,331,161 man hours without a lost-time accident. It is one of the few industries in downstate Illinois to be awarded a certificate from the American College of Surgeons for its first aid establishment.

The new one-story building contains a room for treating minor injuries, a surgery room, a receiving room where treatment for shock and burns may be given, two rest rooms with two beds each, a laboratory and a special room for physical examinations. The rest rooms are for patients whom the doctors wish to have remain under observation for short periods. Also in the building are the office of the safety director and the stock room for safety equipment furnished by the company.

Dressing rooms are designed to afford maximum privacy to all employees receiving examinations. Employees are taken to one of three small rooms opening into the corridor. Locking the hall door from the inside, they prepare for their examination. They are admitted to the doctor's office through another door which must be unlocked by the doctor on duty.

The building is equipped with lock-wheel stretchers in place of operating tables for easier handling of bed patients, a counter-balanced overhead operating light in the surgery room, various treatment chairs and a unit sterilizer in addition to standard industrial first aid facilities.

Ceilings are made of sound absorbent acoustical tile. An air filter unit maintains a constant supply of clean, fresh air for patients and building personnel.

The building is open at all hours seven days a week. Mrs. Lucille May, who has been with Staley's since 1927, is chief nurse. Working with her are five other registered nurses. Doctor F. G. Irwin, chief surgeon, and Doctors F. R. Martin and G. H. Waller maintain office hours at the building and are available for emergency calls.

Completion of the building was marked by open house held on two successive Sunday afternoons to accommodate all persons desiring to view it.

---

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## UNDERGROUND WHEAT STORAGE IN ARGENTINA

A survey concerning facilities for subterranean wheat storage in Argentina, by W. B. McCullough, agricultural expert at Buenos Aires, for the Dominion Bureau of Statistics, discloses that a total capacity of 25,300,000 has been so provided in that country, and that after underground storage of 15 to 30 months the milling and baking properties of wheat in no way deteriorated, with the principal risk thus far encountered being that of humidity.

A study of underground storage began in 1941 and the war resulted in heavy surpluses in grain. Experiments were conducted with 12 silos at Canada de Gomez, the results were successful, and similar installations were built throughout the grain provinces of Buenos Aires, Cordoba, and Santa Fe. Today their number has reached 1,474 with a capacity of 25,300,000 bus.

These underground silos resemble

large swimming pools with ramps at either end to facilitate emptying, and they are lined with cement. Their over-all length is about 111 feet and their width about 26 feet. The average capacity is 21,300 bus.

It is claimed that at 7.86 cents per bu. the cost of underground storage is lower than other methods. There is also a saving in jute bags, of which there is a recurrent shortage. The bags figure prominently in the trade because grain is generally handled as a packaged commodity rather than in bulk.

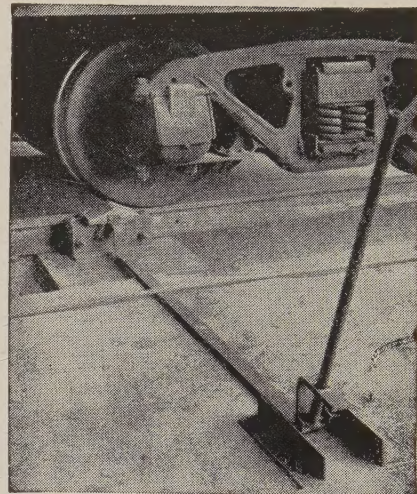
Authorities are enthusiastic about underground storage because: the grain shows no deterioration, the grain weight remains the same, the hermetic sealing which is a waterproof covering over the bins kills insects by suffocation, the germination exceeds 95%, and the only risk is the possibility of fermentation due to humidity if the temperature exceeds 13 degrees.

## HEARING HELD ON STORAGE

The recent meeting held in Washington to hear pro and con discussions on the bill to amend the Commodity Credit Corp. charter, indicated that early action will be taken on such new legislation. The provision in the bill (\$900) commanding greatest interest is in the amending of the charter to make it possible for the CCC to acquire facilities, including items of personal or real property, for the handling, storage and servicing of agricultural commodities which it owns or otherwise controls.

Grain elevator interests are working closely with the USDA on the grain storage situation. Representing the National Grain Trade Council, Harold E. Sanford, Continental Grain Co., pointed out that private and co-operative interests have been steadily adding storage facilities for many years and that substantial building is now in progress. Sanford also stated that if 1948 production is duplicated next summer and if large carryovers follow, the best efforts of all would be required to solve the problem.

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## WORK LOSSES OF ACCIDENTS LEAD DISEASE

Fatal accidents are robbing America of more future working years than either heart disease or cancer, according to a special study by the American Medical Association.

In fact, accidents take a greater toll of productive years than any one natural cause of death, the report states.

For many years, the National Safety Council has listed accidents as the fourth leading cause of death, exceeded by heart disease, cancer and cerebral hemorrhage. The medical association's findings, however, throw new light on the economic importance of accidents, even though accidents take fewer lives annually than do some degenerative diseases.

### Work Loss Computed

The study was made by Frank G. Dickinson, Ph.D., director of the Bureau of Medical Economic Research of the A.M.A., and Everett L. Welker, Ph.D., associate in mathematics, and covers the year 1945.

From federal statistics on the leading causes of deaths, and the ages at time of death, the researchers figured how many years of the usual working lifetime, ages 20 to 65, were lost.

Accidental deaths in 1945 took

away 1,750,000 work years; heart disease, 1,680,000; pneumonia, 1,110,000, and cancer, 1,040,000.

### Heart Disease Top Killer

In actual number of deaths, heart disease took four times as many lives as accidents and the cancer toll was nearly double.

No alarming rise in accidents is seen in the study. The report explains that medical advances have enabled the people of the nation to live longer and die during old age when their working lifetimes largely are over. Furthermore, the 1945 study was made in a year of wartime gasoline rationing, and the accidental death toll was less than it has been in any year since.

There is no doubt, the report points out, that fatal accidents now are the greatest menace to the nation's economy and security.

### ELEVATOR SUPERS DINED IN K. C.

Kansas City, Mo., grain elevator superintendents were tendered a dinner by owners and operators recently at the Hotel Phillips. About 150 persons were in attendance at the dinner which featured Frank A. Theis, Simonds-Shields-Theis Grain Co. president, and crop reporter A. W. Erickson. Oscar Cook, vice-president of Standard Milling Co., presided.

### SAFETY IS A HABIT

Stamped on the back of an envelope received from H. W. Puetz of the Kemper Insurance Co., Milwaukee, was the following:

- H—Have a system
- A—Always set the example
- B—Build it in
- I—Include everything
- T—Take time to do it

### WHEAT POOL OPENS MILL

The new 2 million dollar mill of the Saskatchewan Wheat Pool was recently opened at Saskatoon, Sask. The mill is the second of its kind in Canada and features the latest wheat washing and conditioning equipment. Production capacity is 1000 to 1200 barrels per day, 6000 barrel bulk flour storage, and wheat storage capacity of 535,000 bushels. Sidney H. Fisher is manager.

### BARLEY STOCKS TOTAL 230 MILLION BUSHELS

Higher yields and large acreage increased barley production in 1948 by 13% over 1947 and 6% above the ten-year average. Stocks of barley were 40 million bushels larger than a year earlier and the largest in six years of record, 230 million bushels reported on Jan. 1 by the USDA.

### CIO WANTS \$100 PENSIONS

Demands that workers at retirement be paid \$100 a month pension, in addition to federal social security payments will be made on industry by the CIO. Age is not specified in the proposed idea. The demand is based on eliminating the "double standard" practice of granting pensions to high-salaried executives and denying them to low-salaried employees.

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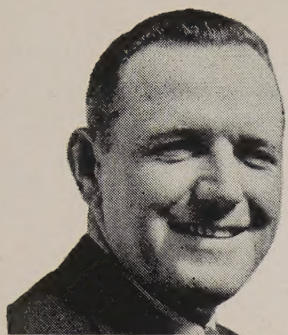
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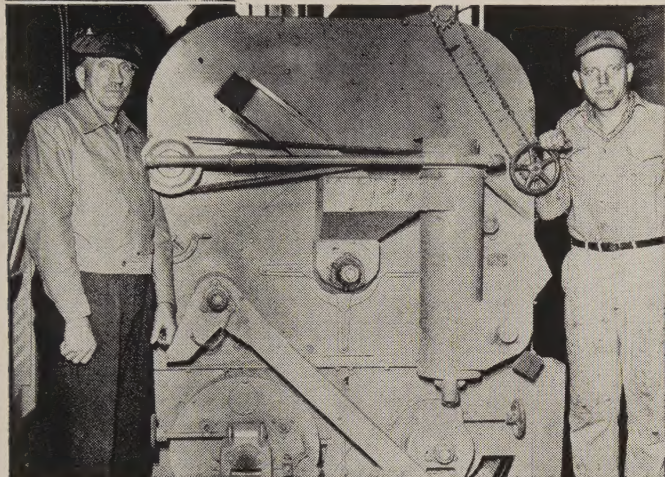
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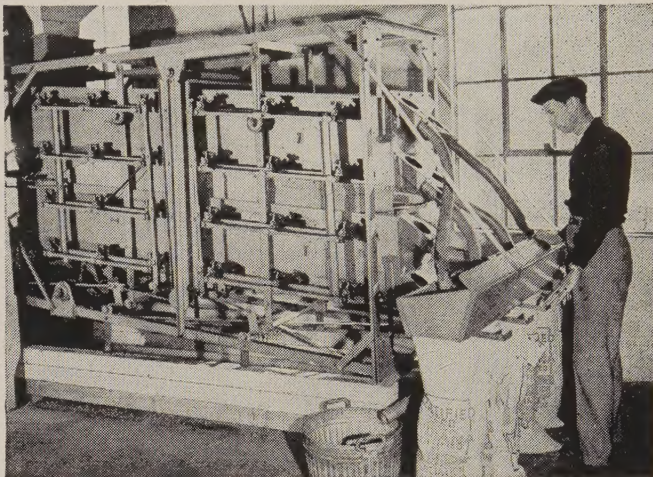




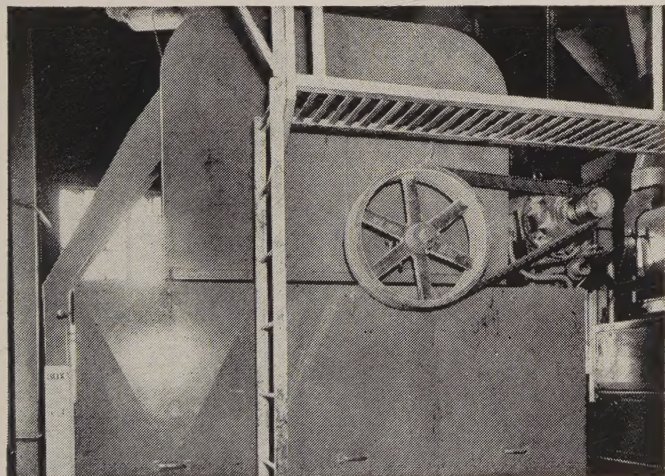
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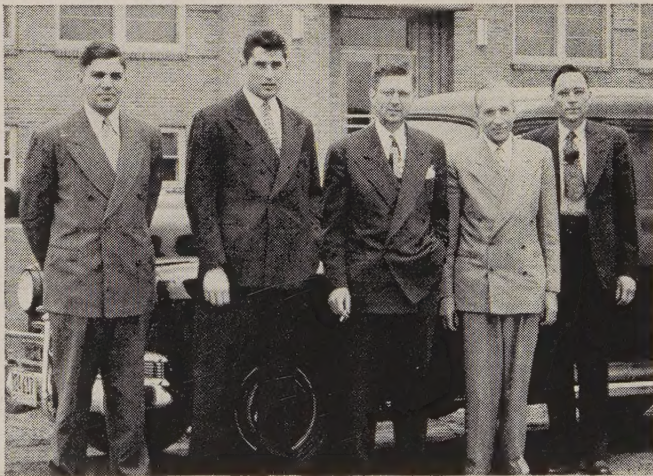
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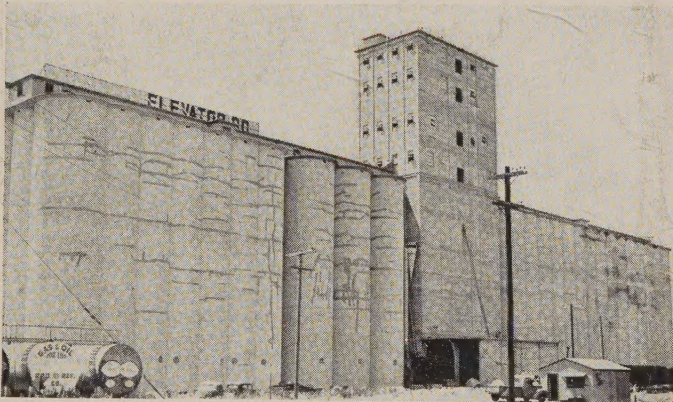
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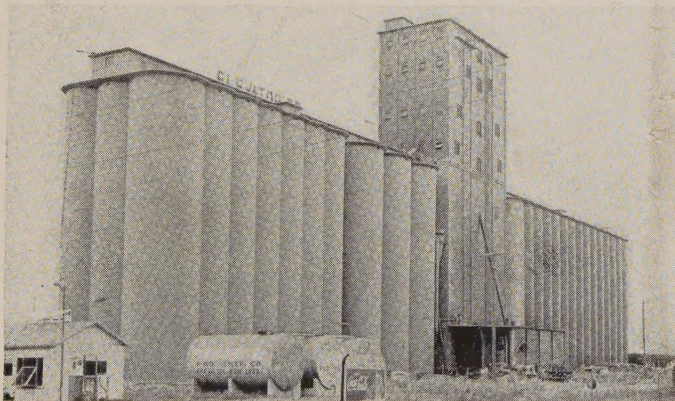
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